Newsletter of the National Biological Information Infrastructure

nbii Access

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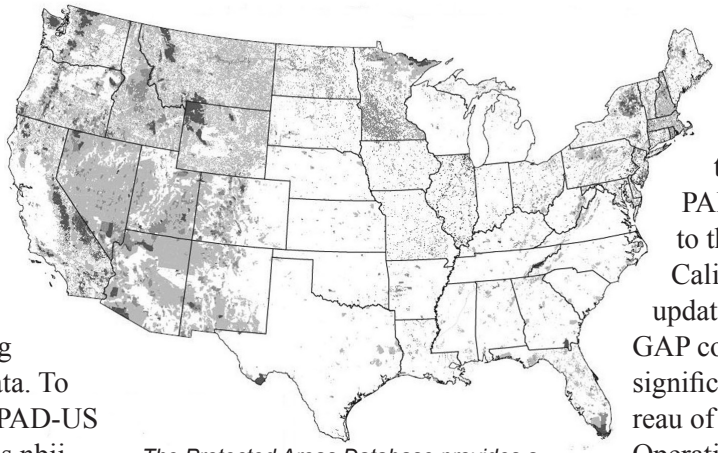
Updated Protected Areas Database for the United States Now Available

The U.S. Geological Survey (USGS) National Biological Information Infrastructure (NBII) Gap Analysis Program (GAP) has released an updated version of the Protected Areas Database of the United States (PAD-US version 1.1) and a redesigned mapping application for viewing the data. To access PAD-US v1.1 and the PAD-US viewer, see <http://gapanalysis.nbii.gov/PADUS>.



The Protected Areas Database provides a national picture of the conservation status of U.S. protected areas.

PAD-US is a national geodatabase that represents public land ownership and conservation lands, including voluntarily provided, privately protected areas (see *Access*, spring 2009). The lands included in PAD-US are assigned conservation status codes denoting the level of biodiversity preservation for each protected area. PAD-US v1.1 contains updates to the Northeast, Northwest, and California. GAP is committed to updating the database regularly. GAP compiled PAD-US v1.1 with significant contributions from the Bureau of Land Management (National Operations Center), the U.S. Forest Service (Automated Lands Program), the GreenInfo Network, and The Nature Conservancy, which contrib-

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Announcing the Texas Coastal Fisheries Mapping Application

Gulf of Mexico coastal fisheries populations have tremendous value in ecological, economic, and social terms. As a result, each coastal state within the NBII Central Southwest Gulf Coast Information Node (CSWGCIN) region is involved in coastal fisheries management. Each agency that collects fisheries-independent (non-harvest) data in the Gulf of Mexico coastal waters does so according to agency-specific missions and goals; this leads to differing sampling methodologies and database formats. Each separate database tells part of the story about the state of Gulf of Mexico coastal fisheries resources. Combining them into a cohesive and complete data record is a difficult, yet important, task.

The goal is to combine coastal fisheries monitoring data from multiple Gulf states into an online mapping application. As a first step, CSWGCIN has acquired fisheries-independent monitoring data from the Texas Parks and Wildlife Department

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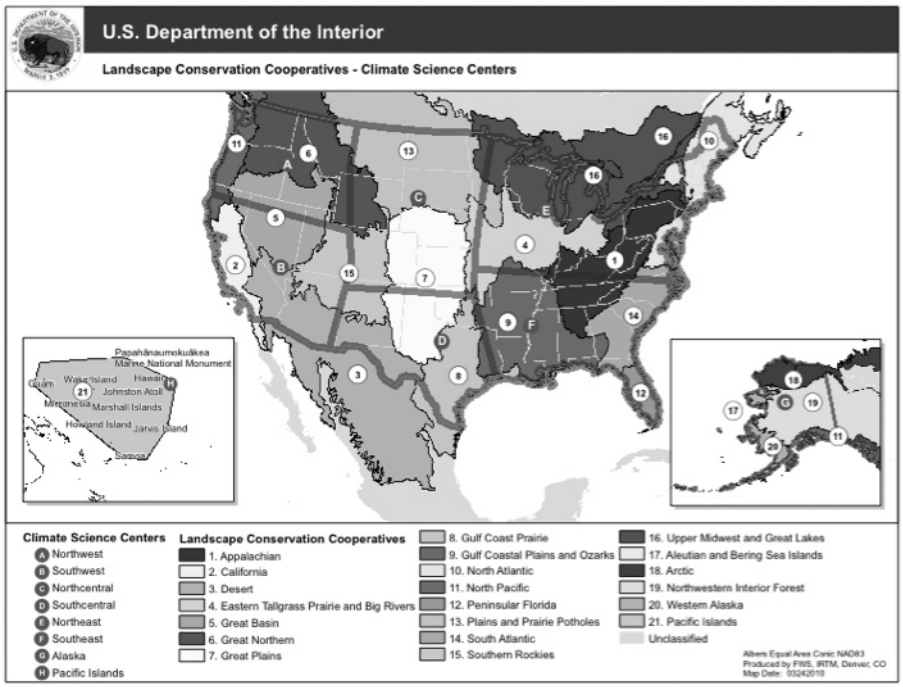
In This Issue

NBII Partners With the National Climate Change Wildlife Science Center

The Department of the Interior (DOI) is in the process of establishing eight regional Climate Science Centers (CSC) through the leadership of the USGS National Climate Change Wildlife Science Center (NCCWSC). These centers will provide scientific information, tools, and techniques that land, water, wildlife, and cultural resource managers and other interested parties can apply to anticipate, monitor, and adapt to climate and ecologically-driven responses at regional-to-local scales.

USGS is taking the lead for DOI on selecting host institutions for these centers, and the NCCWSC will provide the initial staffing and start-up capabilities. The NCCWSC science agenda will focus on the linkage of global climate information with fundamental ecological knowledge, and the application of this understanding to the particular species, habitats, and ecosystems present in each region. The science to be conducted at these centers will be identified through a partnership steering committee in which Landscape Conservation Cooperatives and other management and science entities identify and prioritize key science needs to implement and monitor actions to adapt to climate change.



The Department of the Interior is establishing eight regional Climate Science centers.

From February through July 2010, the NBII program dedicated one staff person, Viv Hutchison, to a full-time detail in the NCCWSC in Reston, VA. Viv's role was to act as the lead for an NBII team of contributors in the development of several components of NCCWSC data management activities. The NBII planned and built an information-sharing portal that will be used for a variety of tasks, primarily to serve the needs of scientists by working to reduce the data management and administration required of modern science.

Features of the portal include a project registration wizard that allows scientists to register funded projects. The registration process

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Visit the NBII Home Page at <www.nbii.gov>.

Humphrey Scholar Journeys Far, Learns Much — and Commits to Change

Last May and June, if you were perusing the Biological Informatics Program offices at USGS headquarters in Reston, VA, you might have noticed a visiting scholar with a warm, engaging smile, but also an occasional faraway look in her eyes. The visitor was Narantuya (Nara) Davaa, Her home: Ulaanbaatar, Mongolia, which is definitely a *long* way from Reston.

Photo credit: Bruce Avera Hunter

Narantuya (Nara) Davaa

Nara came to USGS as a participant in the Humphrey Fellows Program, which was created in 1978 by the Carter administration. The program supports leadership development and networking opportunities for international professionals committed to public service in several disciplines. More specifically, the program provides a year of professional enrichment in the United States for experienced professionals from designated countries throughout the world.

Nara's interests include the environment and natural resources management. "More recently I've specialized in geoinformation science applied to natural resources management," she says. "My emphasis is in land use planning and land use change."

These skills were much in demand in Nara's capacity as the Team Leader at the Environmental Information Centre (EIC) in Ulaanbaatar. Her responsibilities at the EIC included implementing an environmental data/metadata infrastructure; remote sensing data acquisition and processing; and spatial data application developments for forests, biodiversity, impact assessments, desertification, and water management. Nara's focus then and now is on providing spatial data and applications for use by policymakers to support science-based decision making.

She says she has been most pleased to learn about biological informatics at the USGS Biological Informatics Program. "It's a new subject to me," she says. "But I know it's one I'll need to master in the years ahead."

"When we talk about the environment, it is essential to have biological information as a base to deal with conservation issues," she says. "Mongolia has extensive biological research with data that has been gathered. We need to find ways to make this data more usable … to be able to integrate that data according to standards. That relates to such diverse NBII specialties as metadata and spatial information on invasive species, but also the incredible array of images I've seen in your Library of Images From the Environment."

For *Access* readers who aren't totally familiar with Mongolia, it is an independent country situated in central Asia that is bordered by Russia and China. Mongolia is slightly larger than Alaska and contains abundant natural resources, including coal, copper, gold, uranium, and petroleum. Agriculture provides a livelihood for about forty percent of the population. Nearly half of the inhabitants live in urban areas, including Ulaanbaatar, the capital.

Nara says that many challenges in Mongolia require an improved management of the environment. For instance, mining has been very destructive. Impact assessments and ongoing monitoring are needed. In a broader sense, she wants decision makers to be able to rely on the accuracy of the information her future organization offers. It will be aimed at supporting decision making and policy making with spatial information retrieved according to scientific principles.

Nara left USGS in June, eager to return to Mongolia with new ideas she hopes will lead to constructive change in her homeland. She said that while Humphrey Fellows spend much time in the classroom, the aim is to make a difference in their communities. Nara underlines that the improvements she and her Humphrey colleagues hope to make may require a slight shift in attitude, one they all are committed to make. She said they agreed this is best embodied by a thought from Gandhi: "Be the change you want to see in the world."

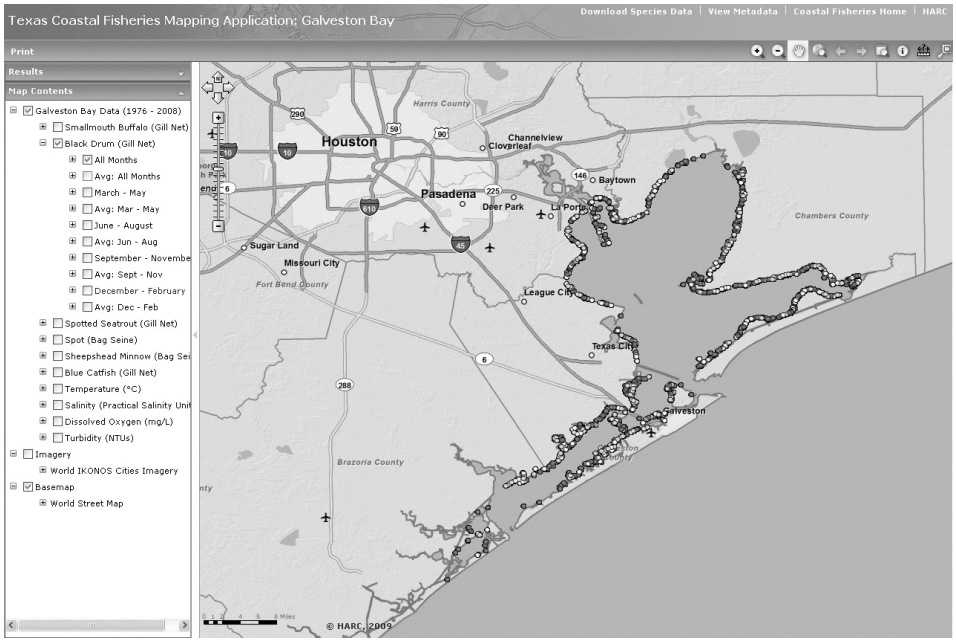
Announcing the Texas Coastal Fisheries Mapping Application (continued from page 1)

(TPWD) Coastal Fisheries Division and made the data accessible through the Texas Coastal Fisheries Mapping Application <http://www.nbii.gov/portal/server.pt?open=512&objID=1786&PageID=6518&mode=2&cached=true>.

The TPWD coastal fisheries resource database dates back to 1977 and is based on a randomized sampling method. The database includes information on a host of estuarine species sampled using a variety of sampling gears: bag seine, shrimp trawl, gill net, and oyster dredge. Each gear type is used by TPWD to sample particular habitat types, species, and life history stages. Bag seines collect juveniles and small adult species that inhabit estuarine edge habitat along shoreline and marsh fringes. Shrimp trawls collect small- to medium-sized species inhabiting bottom habitat of the open bay. Gill nets capture large adult specimens that move along the shore. Oyster dredges are used to collect shellfish from oyster reef habitats.

Data include catch numbers, lengths of specimens captured, hydrological data (e.g., salinity, dissolved oxygen, water temperature), and metadata describing location, date/time, and other characteristics (e.g., depth, sampling effort, etc.) of the sampling event. The TPWD coastal fisheries database is unique in that it contains data for all species captured in the various sampling gears, regardless of recreational or commercial importance.

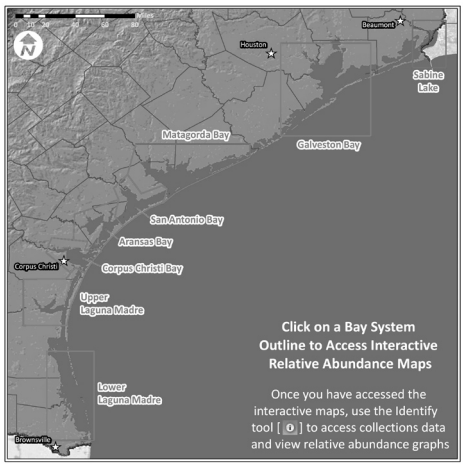
Data were analyzed to determine time series trends in relative abundance for multiple estuarine fisheries species. Indicator species for this project were chosen based on commercial, recreational, or ecological importance. The list below provides examples of species included in the mapping application:



Galveston Bay as shown on the Texas Coastal Fisheries Mapping Application.

Abundance was reported as relative abundance (the proportion of individuals of one species relative

Common Name	Latin Name
Atlantic croaker	*Micropogonias undulatus*
Bay anchovy	*Anchoa mitchilli*
Black drum	*Pogonias cromis*
Blue catfish	*Ictalurus furcatus*
Blue crab	*Callinectes sapidus*
Brown shrimp	*Farfantepenaeus aztecus*
Gafftopsail catfish	*Bagre marinus*
Grass shrimp	*Palaemonetes sp.*
Inland silverside	*Menidia beryllina*
Ladyfish	*Elops saurus*
Lesser blue crab	*Callinectes similis*
Pinfish	*Lagodon rhomboides*
Sheepshead minnow	*Cyprinodon variegatus*
Silver perch	*Bairdiella chrysoura*
Southern flounder	*Paralichthys lethostigma*
Spot	*Leiostomus xanthurus*
Spotfin mojarra	*Eucinostomus argenteus*
Spotted seatrout	*Cynoscion nebulosus*
Striped mullet	*Mugil cephalus*
Tidewater silverside	*Menidia peninsulae*
White shrimp	*Litopenaeus setiferus*



A bay system map from the Texas Coastal Fisheries Mapping Application.

to the total number of individuals of all species captured at one location or time). Relative abundances were displayed in an online mapping interface and made available to users via the CSWGCIN portal.

The goal is to combine coastal fisheries monitoring data from multiple Gulf states into an online mapping application.

In addition to viewing the time series fisheries abundance data in an online mapping interface, users can view physical characterization data for each estuary. The mapping interface provides hydrological information detailing average salinity, dissolved oxygen, turbidity, and water temperatures for the eight major bay systems in Texas. The data portal also includes an option to download the coastal fisheries data, hydrological data, and supporting metadata.

For more information, contact Stephanie Glenn at <sglen@harc.edu>.

Updated Protected Areas Database for the United States Now Available

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uted data about voluntarily provided, privately protected areas. Many other federal, state, local, non-governmental organizations, and land trusts also provided valuable data and review.

To fulfill the NBII's mission of facilitating the widest possible access to and use of biological data and information, GAP is working with UNEP World Conservation Monitoring Centre (WCMC) to link PAD-US v1.1 to the World Database on Protected Areas (WDPA). The updated version of PAD-US v1.1 was submitted to the WCMC in July 2010. In addition, GAP provided PAD-US v1.1 to the Commission for Environmental Cooperation (CEC) for integration into the North American Environmental Atlas, as needed. These linkages will facilitate collaboration among conservation organizations and land managers by establishing a consistent understanding of protected lands status, whether the focus is global or local.

For each mapped land unit, available information in PAD-US v1.1 includes: geographic boundaries, land owner, manager, management designation, parcel name, and reference information. International Union for Conservation of Nature (IUCN) protected area categories <http://www.unep-wcmc.org/protected_areas/categories/index.html> and GAP Status Codes provide a measurement of management commitment for long-term biodiversity protection. GAP categorizes protected areas (see PAD-US map on the front page) as:

- GAP Status Code 1: Permanent protection — lands managed for biodiversity conservation including the persistence of natural disturbances.

- GAP Status Code 2: Permanent protection — lands managed primarily for biodiversity conservation with natural disturbances suppressed.

- GAP Status Code 3: Lands having permanent protection but which are subject to extractive uses (e.g., logging or mining).

- GAP Status Code 4: Lands not managed for conservation or for which there is no information.

PAD-US v1.1 can be explored online via the redesigned PAD-US viewer. The viewer allows users to search for a protected area by name, as well as to get lists of protected areas by county, congressional district, state, or managing agency. Users can also display protected areas across the country by owner or management status, and create printable maps for the area they are interested in.

The development of the database and the viewer further GAP's mission of "keeping common species common." The program provides regional and national assessments of the conservation status of native vertebrate species and natural land cover types to the resource managers, planners, and policymakers who use the information to make decisions about land management activities. As part of the NBII, GAP data and analytical tools have been used in hundreds of applications: from basic research to comprehensive state wildlife plans, and from education projects in schools to ecoregional assessments of biodiversity.

For more information, contact John Mosesso, Gap Analysis Program Manager, at <john_mosesso@usgs.gov>.

National Pollinator Week Exhibit all the "Buzz"

U.S. Geological Survey (USGS) scientists Steve Hilburger, Program Analyst, USGS Wildlife Program; Sam Droege, Wildlife Biologist, USGS Patuxent Wildlife Research Center and coordinator of the USGS Native Bee Inventory and Monitoring Laboratory; and Elizabeth Sellers, Manager, National Biological Information Infrastructure (NBII) Pollinators Project showcased examples of USGS pollinator research and biological informatics tools during the Inter-departmental National Pollinator Week Exhibit hosted on June 21, 2010, by the U.S. Department of Agriculture (USDA).

The USGS-NBII exhibit included information about the Butterflies and Moths of North America database, the NBII Pollinators project, and the Integrated Taxonomic Information System's 2009 World Bees Checklist. Fact sheets about relevant USGS research and technologies and copies of the 2009 and 2010 pollinator posters co-funded by the USGS were also available.

Our scientists and those from other federal agencies – such as the USDA, the Environmental Protection Agency, the U.S. Fish and Wildlife Service, the Bureau of Land Management, and the National Aeronautics and Space Administration as well as from nonprofit organizations such as the the Xerces Society for Invertebrate Conservation – spoke to many exhibit visitors about pollinator research and conservation.

Many visitors also attended a panel discussion on pollinators that was hosted earlier in the day by the USDA. Booth visitors included members of the public (tourists, DC residents, university students, homeowners, and children of all ages), who were visiting the National Mall and other attractions; staff members of other federal agencies; and educators from a variety of educational institutions. Some visitors lingered at the booth (and were most welcome to do so!) to ask questions on a variety of topics, such as how to distinguish bees from flies and other insects; how to attract more or specific species of pollinators to their gardens; and what research is being done or what information is available on wild and managed pollinator species.

Photo by © 2010 Thomas Van Arsdall, used with permission

From left to right: Laurie Adams of the Pollinator Partnership*, Steve Hilburger, Elizabeth Sellers, and Sam Droege.*

Our scientists and those from other federal agencies spoke to many exhibit visitors about pollinator research and conservation.

Photo credit: Elizabeth A. Sellers/NBII

Examples of USGS pollinator research and biological informatics tools being displayed at the USGS booth.

National Pollinator Week continued through June 27th. To learn more about National Pollinator Week and what you can do to learn more about pollinators, visit the Pollinator Partnership's Web site at <http://www.pollinator.org/>.

The NBII <www.nbii.gov> is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. Coordinated by the USGS, the NBII links diverse, high-quality biological databases, information products, and analytical tools maintained by NBII partners and other contributors in government agencies, academic institutions, non-government organizations, and private industry. NBII partners and collaborators also work on new standards, tools, and technologies that make it easier to find, integrate, and apply biological resources information.

NBII Acting in Cupid's Service

The NBII is typically presented as a broad, collaborative program to provide increased access to data and information on the nation's biological resources. We often add that resource managers, scientists, educators, and the general public use the NBII to answer a wide range of questions related to the management, use, or conservation of this nation's biological resources.

True enough. But when we talk about the general public using the NBII, occasionally the motivation has more to do with biological drives than biological resources (which is maybe not so surprising since without biological drives there wouldn't *be* any biological resources).

That said, consider two perspectives on the topic of butterflies, one of many NBII specialties:

• The first is from our NBII Pollinators Web site <www.nbii.gov/portal/server.pt/community/butterflies_and_moths/856>, which features a focus on North American butterflies and moths, members of the order *Lepidoptera*.

• The second is from country music

Photo credit: Elizabeth A. Sellers/life.nbii.gov

Female Eastern tiger swallowtail butterfly on a plumeless thistle flower.

legend and poet Dolly Parton, who wrote: "Love is like a butterfly, as soft and gentle as a sigh, the multicolored moods of love are like its satin wings."

So where's the connection? Actually, it was brought to our attention by an alert aunt and wedding planner who was cruising our butterflies and moths site not so long ago and recalled to us that she wanted to have a butterfly-themed wedding for her niece. She and her niece were planning the details and scouring the net for resources that would ensure this theme was (I) do-able. It seems they needed reliable information on a wide variety of butterfly species, and the NBII site was among the most engaging they visited.

"Thanks for the [butterfly] resources you provided," our supportive inquirer said. "They have really helped my niece out."

Elizabeth Sellers, Manager of the NBII Pollinators Project, thanked the writer for her kind words and added that our site was just another example of the NBII's longstanding theme of Building Knowledge Through Partnerships: "Our Butterflies and Moths Web page was produced through our partnership with the Ecological Society of America (ESA) <www.esa.org> and with input from members of the North American Pollinator Protection Campaign <www.nappc.org>."

Disclosures aside, while resource managers turn to our site most often seeking resources to help build and maintain healthy ecosystems, sometimes we can also provide valuable assistance to those more attuned to building healthy, long-term relationships. In any event, we're glad to be of service to all — including Cupid!

NBII Partners With the National Climate Change Wildlife Science Center (continued from page 2)

results in a discovery-level metadata record, serving as a downloadable product the scientists can build on to develop a complete FGDC-compliant metadata record before project close-out. Additionally, the portal will offer scientists collaboration space with discussion boards and document-sharing capabilities, and the ability to update Web pages about their project. Further, the portal will act as a gateway to national and regional datasets, in addition to NCCWSC funded datasets, downscaled climate models, and model outputs.

One of the important keys to the NCCWSC program is providing scientists the ability to find, access, and manipulate data in new ways that will foster innovative discoveries and/or develop models reflecting future climate change effects. Another result of the NBII staff detail to NCCWSC was the outline of a high-level system architecture design from which the program can build a data network. This document can be used as a foundation for the NCCWSC program as it moves forward in building a data-management program incorporating such technologies as Thematic Real-time Environmental Distributed Data Services (THREDDS) servers (middleware product that forms a bridge between data providers and users), and customized tools for accessing large data models.

In the coming months, the NBII will host the NCCWSC information-sharing portal at <http://nccwsc.usgs.gov/>.

Taking a New Look at Slideshows

Perhaps the most noticeable feature of the NBII Home Page is the slideshow of five digital images that appears front and center in the browsers of those who visit the page.

The NBII uses the slideshow of digital images on its Home Page to showcase a small selection of the excellent photography in NBII LIFE and highlight NBII content that is new or especially topical. The NBII site is so content-rich, it's challenging to give all its features adequate exposure and attention.

When choosing content for the slideshow, the Home Page editors look especially for material that is very new to the NBII; for existing information products that have recently been updated with new information; or for features that, even if well-established on the NBII, are particularly topical because of current events, the time of year, or their association with a special occasion (such as National Pollinator Week). The editors also look across the NBII for content and features that deserve greater exposure, regardless of their novelty.

Most of the images used in the slideshow come directly from the NBII LIFE digital photography collection. On occasion, the slideshow uses screen capture images of actual pages from the NBII.

By default, the slideshow cycles automatically through the five images, but you can stop it at any time. By using the control key at the far right of the slide display's lower edge, you can linger on any given image; or you can select any image for immediate viewing using the numbered keys below the slides. The numbers are correlated with the sequence of the images in each show. Note that clicking on any particular image gets you directly to the feature within the NBII that it is intended to highlight.

The slideshow changes on roughly a monthly basis, though particular slide images may appear for a longer period if they remain topical. Especially significant features of the NBII (such as the Raptor search engine) are sometimes highlighted for several months to better call NBII users' attention to them. Also, there is always a slide representing the NBII LIFE digital media collection, even though the specific image itself changes frequently.

NBII slideshow photos (and captions) need to be both timely and compelling.

Recent NBII Media Placements Run the Gamut

The NBII is mentioned throughout the year in a variety of venues, including the popular and trade press, government publications, and professional journals, as well as the broadcast media. Recent examples include:

• The NBII was named "portal of the month" in the May 2010 issue of the National Oceanic and Atmospheric Administration (NOAA) monthly e-newsletter, *Information Exchange for Marine Educators*. The newsletter is distributed to formal and informal science educators. The newsletter mentions that the NBII is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. It adds that the program focuses on wildlife biology and issues surrounding wildlife. Other site highlights: Ecological Topics (includes bird conservation, fire ecology and management, invasive species, and threatened and endangered species); OBIS-USA, a one-stop source for biogeographic data collected from U.S. waters and oceanic regions; and NBII LIFE (Library of Images From the Environment), which offers different categories of images, special collections, and even a kids section.

• The NBII and NBII LIFE are both heralded in a recent article, "The Best Online Resources for Nature," from *Phoenix Nature & Conservation Examiner* <http://www.examiner.com/x-32082-Phoenix-Nature--Conservation-Examiner~y2010m3d31-Part-3-the-best-online-resources-for-nature>. The piece talks about the NBII as one of the best online resources for nature. After describing the NBII in general, including its broad variety of data and information offerings, the piece explores the library of images called NBII LIFE. It talks about most of the images being free to use and that they cover such topics as animals, fungi and lichens, landscapes, environmental topics, weather, plants, research, microorganisms, management, and interactions among species. The piece concludes by saying that the NBII "is a great place to start when looking for information on our country's biological resources."

• NBII photos have appeared in recent issues of *The Environment Report*. One with a story on "The Incredible, Edible Weed" is found at <http://environmentreport.org/story.php?story_id=4999> and featured a photo of garlic mustard taken by the NBII's Elizabeth A. Sellers. The piece was released on May 7, 2010, and says that people brought garlic mustard to the United States in the mid-1800s because they liked to eat it. Simple enough. Another short piece in the May 5, 2010, edition of the same publication can be found at <http://www.environmentreport.org/story.php?story_id=4994>. The piece was about "Honeybee Die-Offs" and featured an appropriate NBII photo. You can see another Elizabeth A. Sellers/LIFE photo, this one of a monarch butterfly, in the Defenders of Wildlife publication found at <http://www.defenders.org/wildlife_and_habitat/wildlife/monarch_butterfly.php>. The piece talks in some detail about the monarch butterfly and also offers a video narrated by Jeff Corwin that discusses this iconic butterfly species.

• *oneINTERIOR* <http://oneinterior.doi.net/oneinterior/News/psrw2010.cfm>, the DOI-wide internal publication, released an article May 26, 2010, on "DOI Participates in Public Service Recognition Week." The event was held on the National Mall from May 6-9, 2010. Exhibits from each DOI bureau echoed this year's theme, "Government Innovation and Opportunity." Bruce Avera Hunter of NBII LIFE helped staff the USGS exhibit and contributed several photos to the piece.

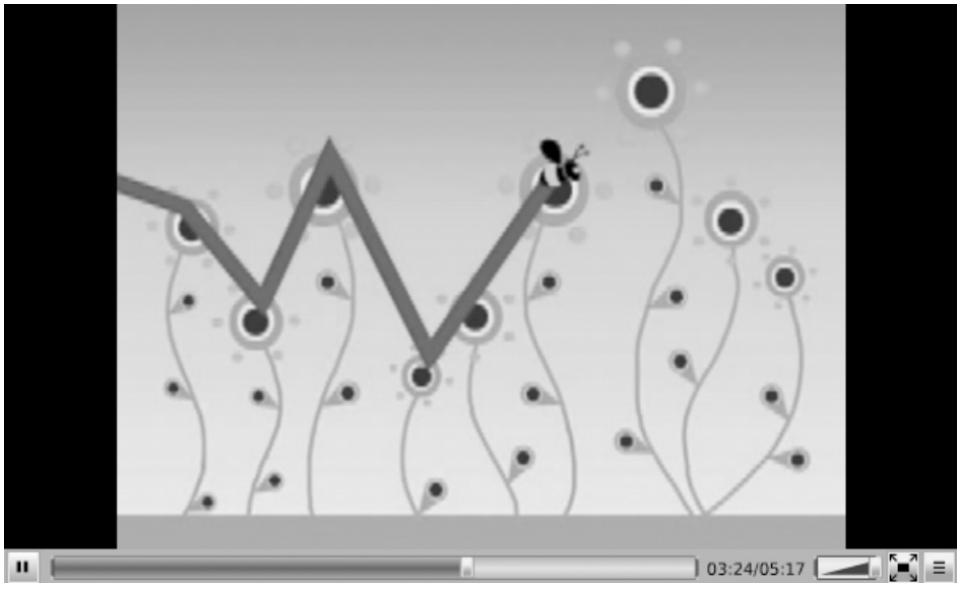
• A USGS press release issued on June 11, 2010, talked about the release by the USGS of the most detailed national vegetation U.S. land-cover map to date. The map will enable conservation professionals to identify places in the country with sufficient habitat to support wildlife. The map was produced by the USGS Gap Analysis Program (GAP), an important NBII component. Pick-up of the release has been extraordinary and can be noted in a wide variety of venues, including *USAToday* <http://content.usatoday.com/topics/article/Natural+and+Physical+Sciences/Environment/Global+Warming/0aHJ6In0De8Pd/1>, *PhysOrg.com* <http://www.physorg.com/news195733155.html>, *YubaNet.com* <http://yubanet.com/scitech/First-Detailed-National-Map-of-Land-Cover-Vegetation-Released.php>, *Earthbytes* <http://tennesseehawk.typepad.com/earthbytes/climate-change/>, *Geospatial World* <http://beta.gisdevelopment.net/index.php?option=com_content&view=article&id=17762%3Aus-land-cover-vegetation-map-to-support-wildlife&catid=48%3Aproduct-cartography-map-publishing&Itemid=61>, and *New Science Magazine* <http://www.newsciencemagazine.com/2010/06/15/first-detailed-national-map-of-land-cover-vegetation-in-us-released/>.

Invasive Species Toolbox

Do you have news about an invasive species project you'd like to share? Please send suggestions you might have for Toolbox columns to <asimpson@usgs.gov> or <esellers@usgs.gov>.

Discover Life's Video of Bee Hunt Project Data Collection Protocol

There's a new five-minute online video describing how to take scientifically useful photographs of insects. Whether for invasive species data collection or pollinator studies, Discover Life's video shows how to take more effective photographs in the field. Thanks to their partnership with the NBII's Invasive Species Information Node (ISIN), all of Discover Life's tools are free via the Web. They are rallying citizen scientists to monitor bees, fungi, lichens, ladybugs, moths, butterflies, caterpillars, and goldenrods. The video can be viewed online at <http://www.discoverlife.org/mp/20p?see=V_BEE1>. For more information, contact Nancy Lowe at <nancy@discoverlife.org>.



Discover Life's Bee Hunt video describes a protocol for taking photographs in the field.

Invasive Species Electronic Mailing Lists

As part of the National Invasive Species Early Detection and Rapid Response Framework <http://edrr.nbii.gov>, the ISIN has catalogued a collection of 52 invasive species-related listserv groups. These groups are often a good source of information for the early detection of invasive species. Sometimes list members can help you identify an invasive species or help get your sighting report to the right people. The listserv groups are also a good way to share up-to-date occurrences; information on meetings, jobs, articles; and more. For more information about the framework and its resources, or to submit a resource to the framework, please contact Annie Simpson <asimpson@usgs.gov> or Elizabeth Sellers <esellers@usgs.gov>.

What's Invasive? There's an "App" for That.

The Center for Embedded Networked Sensing (CENS) at the University of California, Los Angeles, has developed iPhone and Android cell phone applications (or "apps") for reporting invasive species locations. CENS is cooperating with the National Park Service's Santa Monica Mountains National Recreation Area, and also welcomes participation by members of the general public who wish to locate invasive plant species by making geo-tagged observations and taking photos "to alert us of the spread of habitat-destroying plants." Data submissions from non-GPS-enabled phones are also encouraged. See <http://www.whatsinvasive.com> for more information.

Glossary of Plant Terms

When you're seeking assistance for the identification or eradication of invasive plants, some terms used in reference information can be difficult to understand, especially if you're not an expert. *Tropical Forages* has an extensive glossary of plant-related terms that can help <http://www.tropicalforages.info/key/Forages/Media/Html/Glossary.htm>. The site also offers about 200 fact sheets for various native and invasive tropical forage plants and other tools developed collaboratively by CSIRO Sustainable Ecosystems, Department of Primary Industries & Fisheries (Qld), Australia; Centro Internacional de Agricultura Tropical (CIAT), Colombia; and the International Livestock Research Institute (ILRI), Kenya.

Ocean Biogeographic Information System-USA (OBIS-USA)

Following successful completion this year of the Census of Marine Life (COML) – an international effort to catalog the diversity, abundance, and distribution of life in the Earth's oceans – the NBII has emerged as a critical leader for marine biodiversity data. OBIS-USA, which the NBII coordinates, represents an important accomplishment of the U.S. effort in COML. In collaboration with other agencies and partners, the NBII has succeeded in securing bridge funding (within the United States and other countries) to continue COML and OBIS efforts through the Intergovernmental Oceanographic Commission. OBIS-USA has focused on data mobilization, partnership development, and improving functionality in this second year of implementation. Recent highlights include:

- In a letter to USGS Director Marcia McNutt, the Marine Mammal Commission commended USGS for OBIS-USA as a location for the nation's marine mammal data.
- In an ongoing partnership with the National Oceanic and Atmospheric Administration (NOAA), NOAA has provided a list of 292 databases for OBIS-USA and funded NBII participation in a project to expand the current OBIS data schema to support the Integrated Ocean Observing Information System.
- Data from USGS science centers are being added and the NBII is coordinating with the coastal marine geology program to integrate environmental data with biodiversity data, and allow improved spatial planning in marine areas.

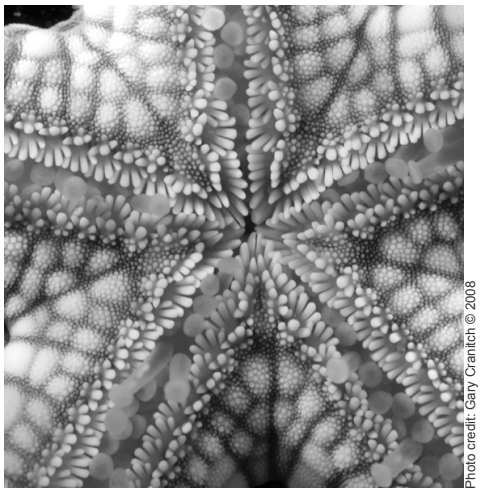


Photo credit: Gary Cranitch © 2008

Nardoa rosea *sea star as seen from the underside. Photographed during Census of Coral Reef Ecosystems (CReefs) research, Heron Island, Australia.*

- Over four million records are available for searching, viewing, and downloading data from Large Marine Ecosystems. (See the test site at <http://dbmuseblade.colorado.edu/ObisUsaTest/portal/SearchLMEdl.php>.) The data schema is being expanded to include richer datasets than Darwin Core currently offers.

The OBIS-USA portal can be accessed at <http://www.nbii.gov/portal/server.pt/community/marine_data_(obis-usa)/791>. For further information, please contact Mark Fornwall at <mark_fornwall@usgs.gov>.

The Inter-American Biodiversity Information Network and Nature Conservancy Debut New Online Ecosystem Assessment Tool

The Nature Conservancy (TNC) and the Inter-American Biodiversity Information Network (IABIN) recently launched the Ecosystem Analysis and Reporting (EAR) tool to visualize ecosystem status and threats in the Americas. The tool is available in both browser-based and ARC desktop-based formats (with English and Spanish user manuals) at <http://gg.usm.edu/EAR/>.

The design and development of the tool was executed by TNC's Caribbean Science Program, working closely with the Department of Geography and Geology at the University of Southern Mississippi.

This tool builds on the information made available through IABIN's Ecosystems and Protected Areas Thematic Networks by providing conservation decision makers with products for assessing the extent of ecosystems under effective conservation, and offering direction on where to work and what actions may be needed to improve biodiversity conservation.

The tool currently includes data from two pilot regions: the Mesoamerican Reef (in Belize and the Yucatan Peninsula) and the Northern Andes of Colombia, Peru, and Ecuador. TNC led a presentation and workshop utilizing the tool at the Society for Conservation GIS meeting in Monterey, CA, in July and will also present the tool at upcoming IABIN meetings.

This tool is the first in a series of five planned "value-added products for decision makers" that IABIN is developing with funds from the Global Environment Facility (GEF). Future tools will integrate additional types of data IABIN has digitized and made available through its GEF project and related activities. The tools will make this data available in more user-friendly and interactive formats, and will also allow select conservation-focused analyses to be performed utilizing this data. For further information, please contact Ben Wheeler at <bwheeler@usgs.gov>.

Upcoming Events of NBII Interest

95th Annual Meeting of the Ecological Society of America, Pittsburgh, PA.	July 30–August 6
2010 Hawaii Conservation Conference: Pacific Ecosystem Management and Restoration, Honolulu, HI.	August 4–6
Association of Field Ornithologists 2010 Annual Meeting, Ogden, UT.	August 12–14
140th Meeting of the Annual Fisheries Society, Pittsburgh, PA,	September 12–16
2010 Raptor Research Foundation Conference, Fort Collins, CO.	September 22–26
100th Association of Fish and Wildlife Agencies Annual Meeting, Grand Rapids, MI.	September 26–29
The Wildlife Society 17th Annual Conference, Snowbird, UT.	October 2–6
Organization of Fish and Wildlife Information Managers 2010 Conference and Annual Meeting, Cadiz, KY.	October 17–21

National Biological Information Infrastructure

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